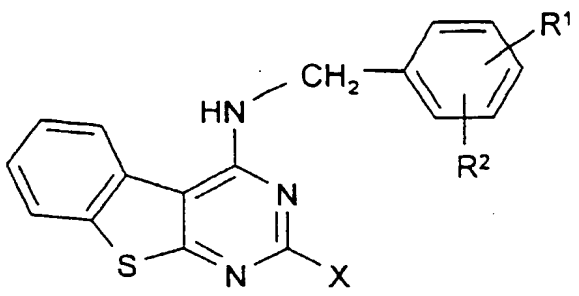
Patent Claims

1. Compounds of the formula I



I

in which

R^1, R^2 in each case independently of one another are H, A, OH, OA or Hal,

X is R^4, R^5 or R^6, which is monosubstituted by R^7,

R^4 is linear or branched alkylene having 1-10 C atoms, in which one or two CH_2 groups can be replaced by -CH=CH- groups,

R^5 is cycloalkyl or cycloalkyl alkylene having 5-12 C atoms,

R^6 is phenyl or phenylmethyl,

R^7 is COOH, COOA, $CONH_2$, CONHA, $CON(A)_2$ or CN,

A is alkyl having 1 to 6 C atoms and

Hal is F, Cl, Br or I,

where at least one of the radicals R^1 or R^2 is OH,

and their physiologically acceptable salts.

2. Compounds of the formula I according to Claim 1

(a) 3-[4-(3-chloro-4-hydroxybenzylamino)benzo[4,5]-thieno[2,3-d]pyrimidin-2-yl]propionic acid;

(b) 7-[4-(3-chloro-4-hydroxybenzylamino)benzo[4,5]-thieno[2,3-d]pyrimidin-2-yl]heptanoic acid;

(c) 5-[4-(3-chloro-4-hydroxybenzylamino)benzo[4,5]-thieno[2,3-d]pyrimidin-2-yl]valeric acid;

(d) 2-{4-[4-(3-chloro-4-hydroxybenzylamino)benzo[4,5]-thieno[2,3-d]pyrimidin-2-yl]cyclohex-1-yl}acetic acid;

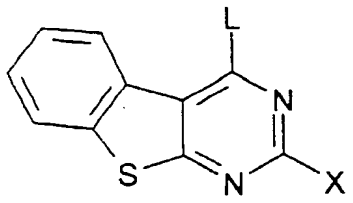
(e) 4-[4-(3-chloro-4-hydroxybenzylamino)benzothieno-[2,3-d]pyrimidin-2-yl]cyclohexanecarboxylic acid

and their physiologically acceptable salts.

3. Process for the preparation of compounds of the formula I according to Claim 1 and their salts,

characterized in that

a) a compound of the formula II

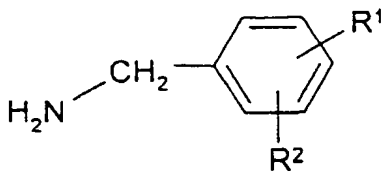


II

in which
X has the meaning indicated,

and L is Cl, Br, OH, SCH_3 or a reactive esterified OH group,

is reacted with a compound of the formula III



III

in which

R^1 and R^2 have the meanings indicated,

or

b) in a compound of the formula I, a radical X is converted into another radical X by hydrolysing an ester group to a COOH group or converting a COOH group into an amide or into a cyano group

or

c) in a compound of the formula I, a radical R^1 and/or R^2 is converted into another radical R^1 and/or R^2 by converting an alkoxy group into a hydroxyl group,

and/or a compound of the formula I is converted into one of its salts.

4. Process for the production of pharmaceutical preparations, characterized in that a compound of the formula I according to Claim 1 and/or one of its physiologically acceptable salts is brought into a suitable dose form together with at least one solid, liquid or semi-liquid vehicle or excipient.

5. Pharmaceutical preparation, characterized in that it contains at least one compound of the formula I according to Claim 1 and/or one of its physiologically acceptable salts.

6. Compounds of the formula I according to Claim 1 and their physiologically acceptable salts for the

control of diseases of the cardiovascular system and for the treatment and/or therapy of potency disorders.

7. Medicaments of the formula I according to Claim 1 and their physiologically acceptable salts as phosphodiesterase V inhibitors.

8. Use of compounds of the formula I according to Claim 1 and/or their physiologically acceptable salts for the production of a medicament.

9. Use of compounds of the formula I according to Claim 1 and/or their physiologically acceptable salts for the production of a medicament for the treatment and/or therapy of potency disorders.